

[METHOD OF MANUFACTURING A LOW TEMPERATURE POLYSILICON FILM]

Abstract

A method of manufacturing a low temperature polysilicon film is provided. A first metal layer is formed on a substrate; and openings have been formed in the first metal layer. A second metal layer is formed on the first metal layer; and a hole corresponding to each of the openings is formed in the second metal layer. A silicon layer is formed on the second metal layer; a silicon seed is formed on the substrate inside each of the holes. After removing the first and the second metal layers, an amorphous silicon layer is formed on the substrate by using the silicon seed. Then a laser crystallization step is performed to form a polysilicon layer from the amorphous layer. Since the position of the silicon seed can be controlled, the size and distribution of the silicon grain and the number of the silicon crystal interface can also be controlled.